

IN THE CLAIMS:

The following is a complete listing of the claims, and replaces all earlier listings and all earlier versions.

1. (Currently Amended) A recording control apparatus which performs recording on a recording medium by using a recording head, said apparatus comprising:

said recording head, which includes at least one recording element array in which plural recording elements are aligned along a predetermined direction;

a driving correction table which includes pixel correction data for correcting a recording driving characteristic of each recording element constituting said recording element array by the pixel unit of image data, and in which the pixel correction data is provided corresponding to plural lines of the image data in a sub-scan direction; and

driving control means which modifies a recording driving time of each recording element of said recording element array by the pixel unit, ~~on the basis of~~ according to switching of the correction data for each line based on said driving correction table including the pixel correction data of the plural lines.

2. (Original) An apparatus according to Claim 1, wherein said driving control means comprises:

a correction memory for storing said driving correction table including the pixel correction data of the plural lines;

correction pixel designation means for designating a correction pixel number of the pixel correction data stored in said correction memory;

correction queue designation means for designating a correction queue of the pixel correction data stored in said correction memory; and

driving time calculation means for calculating the recording driving time of each recording element of said recording element array by the pixel unit, by using the pixel correction data of each line to which the correction pixel number and the correction queue have been designated.

3. (Currently Amended) A recording control apparatus which performs electrophotographic recording by using a recording head arranged in a main scan direction perpendicular to a movement direction of a recording medium, said recording control apparatus comprising:

said recording head, which includes at least one recording element array in which plural recording elements are aligned along said main scan direction;

a light quantity correction table which includes pixel correction data for correcting a light emission characteristic of each recording element constituting said recording element array by the pixel unit of image data, and in which the pixel correction data is provided corresponding to plural lines of the image data in a sub-scan direction; and

driving control means which modifies a light emission driving time of each recording element of said recording element array by the pixel unit, ~~on the basis of~~

according to switching of the correction data for each line based on said light quantity

correction table including the pixel correction data of the plural lines.

4. (Original) An apparatus according to Claim 3, wherein said driving control means comprises:

a correction memory for storing said light quantity correction table including the pixel correction data of the plural lines;

correction pixel designation means for designating a correction pixel number of the pixel correction data stored in said correction memory;

correction queue designation means for designating a correction queue of the pixel correction data stored in said correction memory; and

driving time calculation means for calculating the light emission driving time of each recording element of said recording element array by the pixel unit, by using the pixel correction data of each line to which the correction pixel number and the correction queue have been designated.

5. (Original) An apparatus according to Claim 3, wherein said recording element array includes at least one LED array in which plural LED elements are aligned along said main scan direction.

6. (Currently Amended) A recording control method which performs recording on a recording medium by using a recording head, the recording head including at

least one recording element array in which plural recording elements are aligned along a predetermined direction, said method comprising:

a step of generating a driving correction table which includes pixel correction data for correcting a recording driving characteristic of each recording element constituting the recording element array by the pixel unit of image data, and in which the pixel correction data is provided corresponding to plural lines of the image data in a sub-scan direction; and

a driving control step₂ of modifying a recording driving time of each recording element of the recording element array by the pixel unit, ~~on the basis of~~ according to switching of the correction data for each line based on the driving correction table including the pixel correction data of the plural lines.

7. (Original) A method according to Claim 6, wherein said driving control step comprises:

a storage step₂ of storing the driving correction table including the pixel correction data of the plural lines in a correction memory;

a correction pixel designation step₂ of designating a correction pixel number of the pixel correction data stored in the correction memory;

a correction queue designation step₂ of designating a correction queue of the pixel correction data stored in the correction memory; and

a driving time calculation step₂ of calculating the recording driving time of each recording element of the recording element array by the pixel unit, on the basis of the

pixel correction data of each line to which the correction pixel number and the correction queue have been designated.

8. (Currently Amended) A recording control method which performs electrophotographic recording on a recording medium moving in a direction perpendicular to a main scan direction, by using a recording head which includes at least one recording element array in which plural recording elements are aligned along the main scan direction, said recording control method comprising:

a step of generating a light quantity correction table which includes pixel correction data for correcting a light emission characteristic of each recording element constituting the recording element array by the pixel unit of image data, and in which the pixel correction data is provided corresponding to plural lines of the image data in a sub-scan direction; and

a driving control step₁ of modifying a light emission driving time of each recording element of the recording element array by the pixel unit, ~~on the basis of~~ according to switching of the correction data for each line based on the light quantity correction table including the pixel correction data of the plural lines.

9. (Currently Amended) A method according to Claim 8, wherein said driving control step comprises:

a storage step₁ of storing the light quantity correction table including the pixel correction data of the plural lines in a correction memory;

a correction pixel designation step₂ of designating a correction pixel number of the pixel correction data stored in the correction memory;

a correction queue designation step₃ of designating a correction queue of the pixel correction data stored in the correction memory; and

a driving time calculation step₄ of calculating the light emission driving time of each recording element of the recording element array by the pixel unit, on the basis of the pixel correction data of each line to which the correction pixel number and the correction queue have been designated.

10. (Original) A method according to Claim 8, wherein the recording element array includes at least one LED array in which plural LED elements are aligned along the main scan direction.

11. (Currently Amended) A medium which stores a control program to cause a computer to perform recording control for a recording medium, by using a recording head which includes at least one recording element array in which plural recording elements are aligned along a predetermined direction,

said control program causing the computer

to generate a driving correction table which includes pixel correction data for correcting a recording driving characteristic of each recording element constituting the recording element array by the pixel unit of image data, and in which the pixel correction data is provided corresponding to plural lines of the image data in a sub-scan direction, and

to modify a recording driving time of each recording element of the recording element array by the pixel unit, ~~on the basis of~~ according to switching of the correction data for each line based on the driving correction table including the pixel correction data of the plural lines.

12. (Original) A medium according to Claim 11, wherein said control program causes the computer

- to store the driving correction table including the pixel correction data of the plural lines in a correction memory,
- to designate a correction pixel number of the pixel correction data stored in the correction memory,
- to designate a correction queue of the pixel correction data stored in the correction memory, and
- to calculate the recording driving time of each recording element of the recording element array by the pixel unit, on the basis of the pixel correction data of each line to which the correction pixel number and the correction queue have been designated.

13. (Currently Amended) A medium which stores a control program to cause a computer to perform electrophotographic recording control for a recording medium moving in a direction perpendicular to a main scan direction, by using a recording head which includes at least one recording element array in which plural recording elements are aligned along the main scan direction,

said control program causing the computer

to generate a light quantity correction table which includes pixel correction data for correcting a light emission characteristic of each recording element constituting the recording element array by the pixel unit of image data, and in which the pixel correction data is provided corresponding to plural lines of the image data in a sub-scan direction, and

to modify a light emission driving time of each recording element of the recording element array by the pixel unit, ~~on the basis of~~ according to switching of the correction data for each line based on the light quantity correction table including the pixel correction data of the plural lines.

14. (Original) A medium according to Claim 13, wherein said control program causes the computer

to store the light quantity correction table including the pixel correction data of the plural lines in a correction memory,

to designate a correction pixel number of the pixel correction data stored in the correction memory,

to designate a correction queue of the pixel correction data stored in the correction memory, and

to calculate the light emission driving time of each recording element of the recording element array by the pixel unit, on the basis of the pixel correction data of each line to which the correction pixel number and the correction queue have been designated.

15. (Original) A medium according to Claim 13, wherein the recording element array includes at least one LED array in which plural LED elements are aligned along the main scan direction.

16. (Currently Amended) A recording control apparatus for controlling a recording element array, comprising:

storing means for storing correction data for compensating a recording characteristic error of a recording element in the recording element array by plural lines;

driving means for driving each of the recording elements ~~in the recording element~~ on the basis of the correction data ~~for compensating a recording characteristic error of the recording element;~~ and

control means for periodically changing the correction data used by said driving means for one recording element, with respect to each line.

17. (Original) An apparatus according to Claim 16, wherein said driving means changes a driving pulse width of each of the recording elements in the recording element array on the basis of the correction data.

18. (Original) An apparatus according to Claim 16, further comprising storage means for storing the correction data.

19. (Original) An apparatus according to Claim 16, wherein the recording element is a light emission element.

20. (Currently Amended) A recording control method for recording an image by using a recording element array, said method comprising:

a storage step, of storing correction data for compensating a recording characteristic error of a recording element in the recording element array by plural lines;

a driving step, of driving each of ~~the~~ recording elements in the recording element array on the basis of ~~the~~ correction data for compensating a recording characteristic error of the recording element; and

a control step, of periodically changing the correction data used in said driving step for one recording element, ~~with respect to each line.~~

21. (Original) A method according to Claim 20, wherein in said driving step a driving pulse width of each of the recording elements in the recording element array is changed on the basis of the correction data.

22. (Original) A method according to Claim 21, further comprising a reading step of reading the correction data from a memory storing the correction data.

23. (Original) A method according to Claim 22, wherein the recording element is a light emission element.

IN THE DRAWINGS

[??how many??] sheets of substitute drawings are submitted herewith, to replace the original sheets bearing Figs. 11-24.